TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

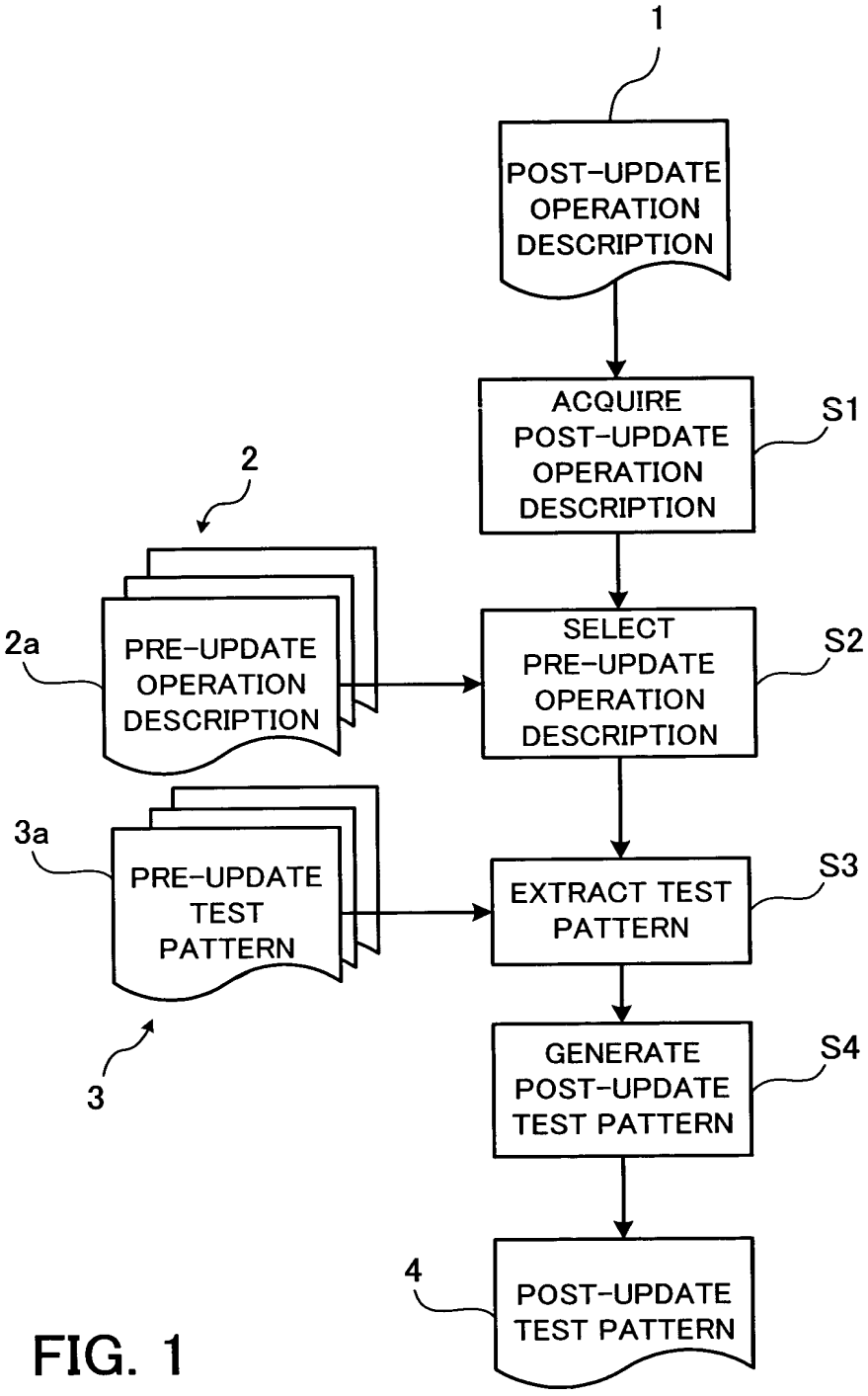

FIG. 1

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

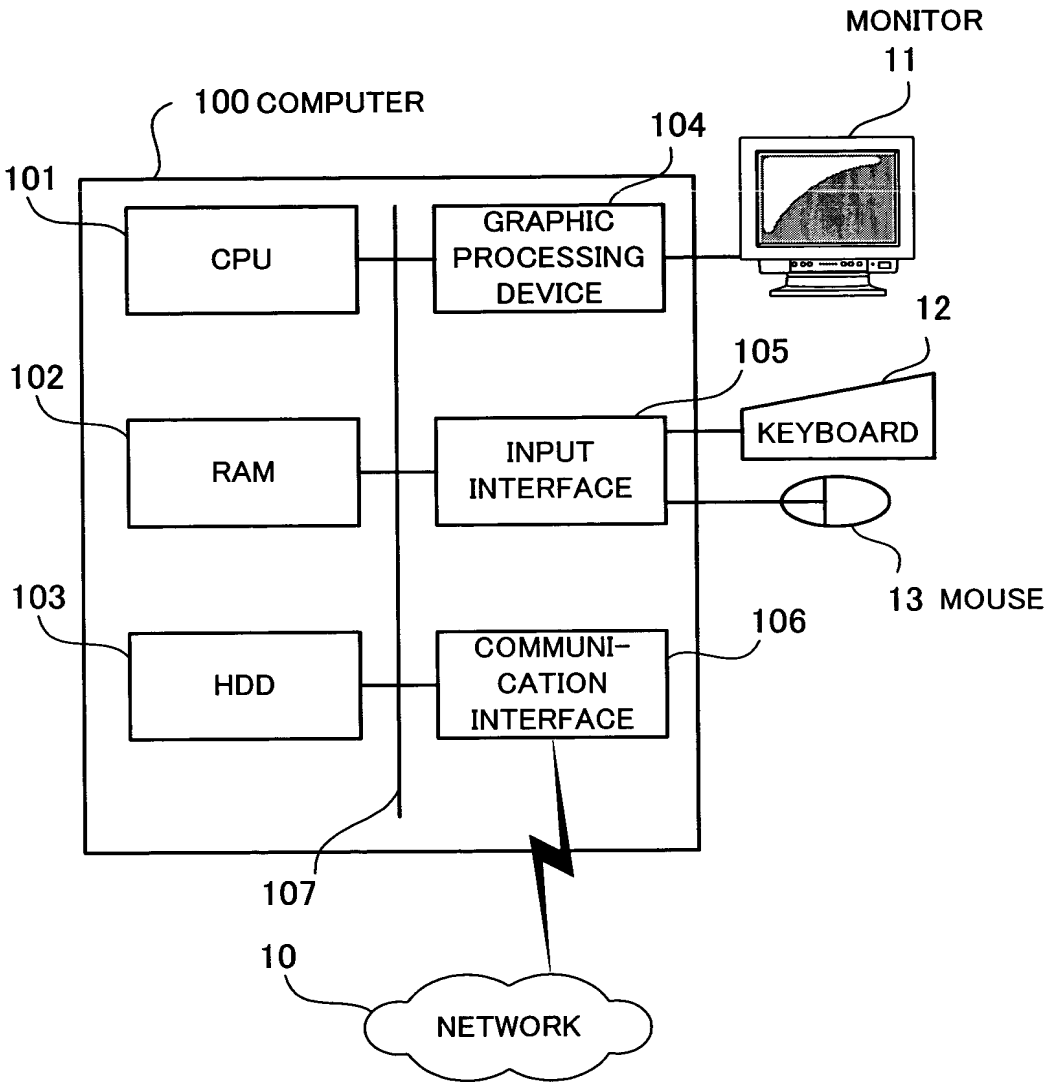

FIG. 2

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

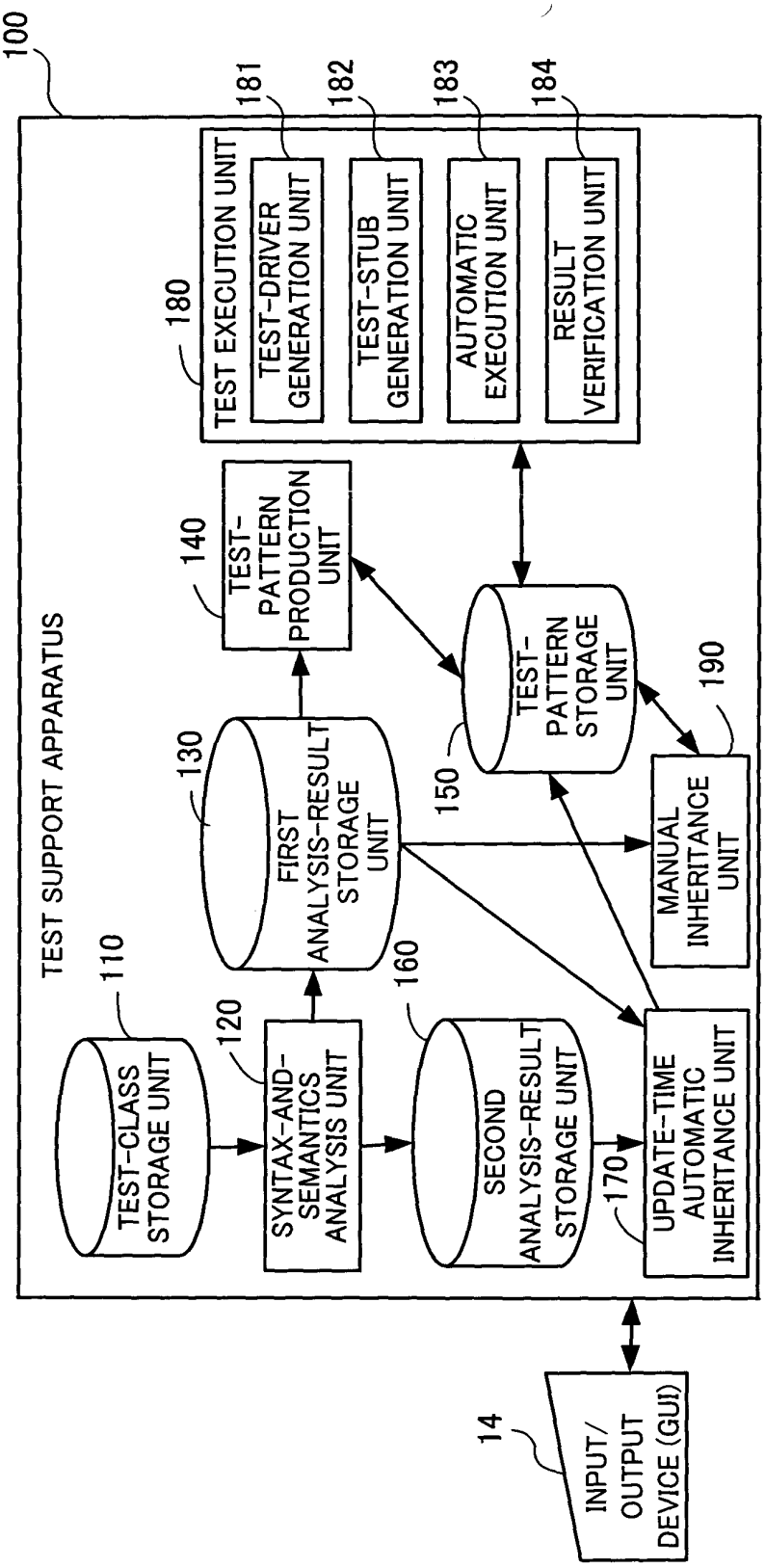

FIG. 3

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

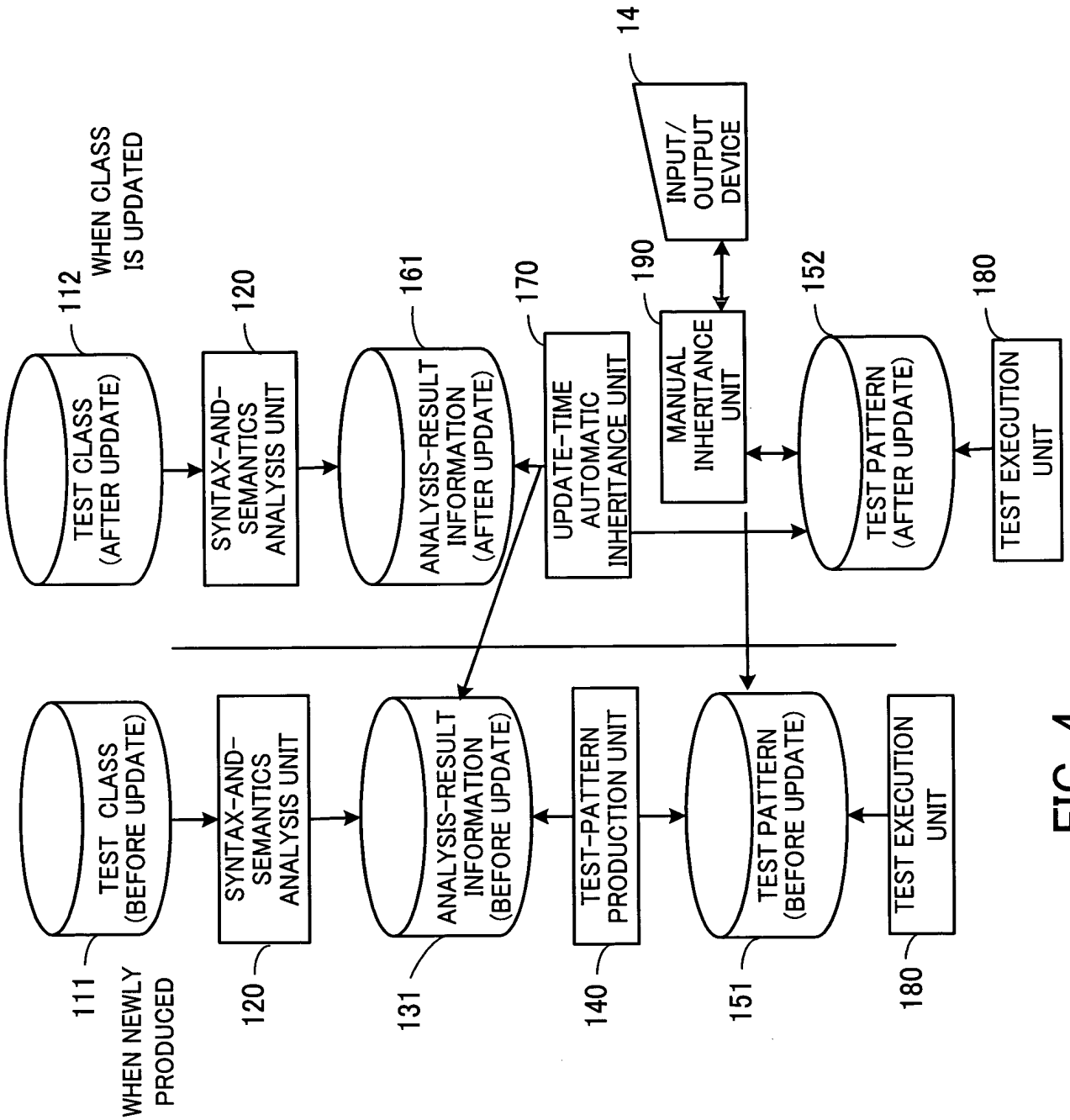

FIG. 4

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

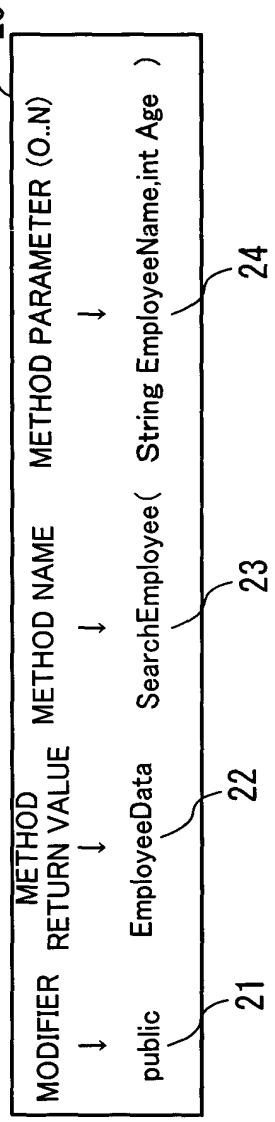

FIG. 5

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

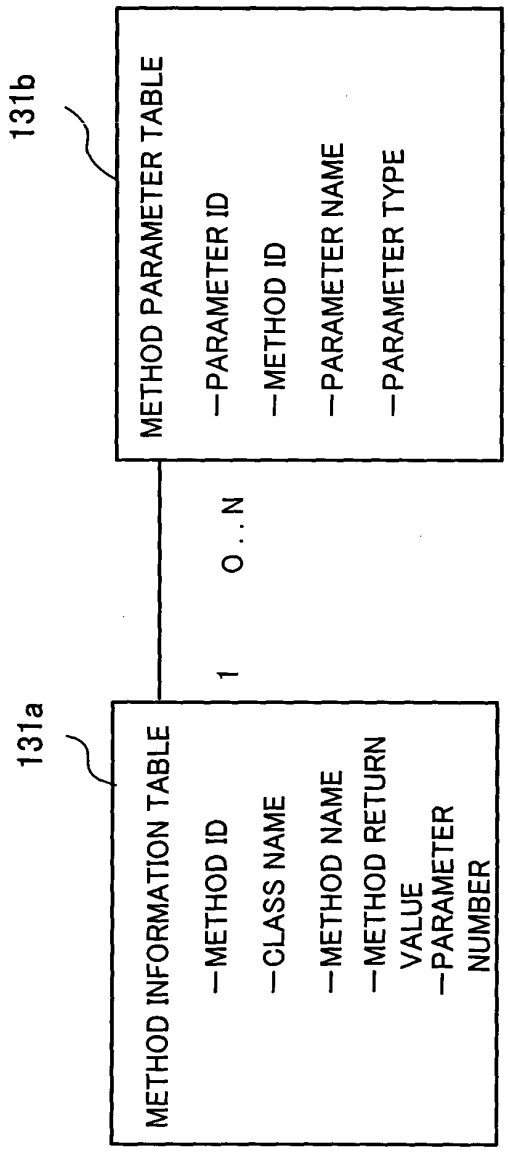

FIG. 6

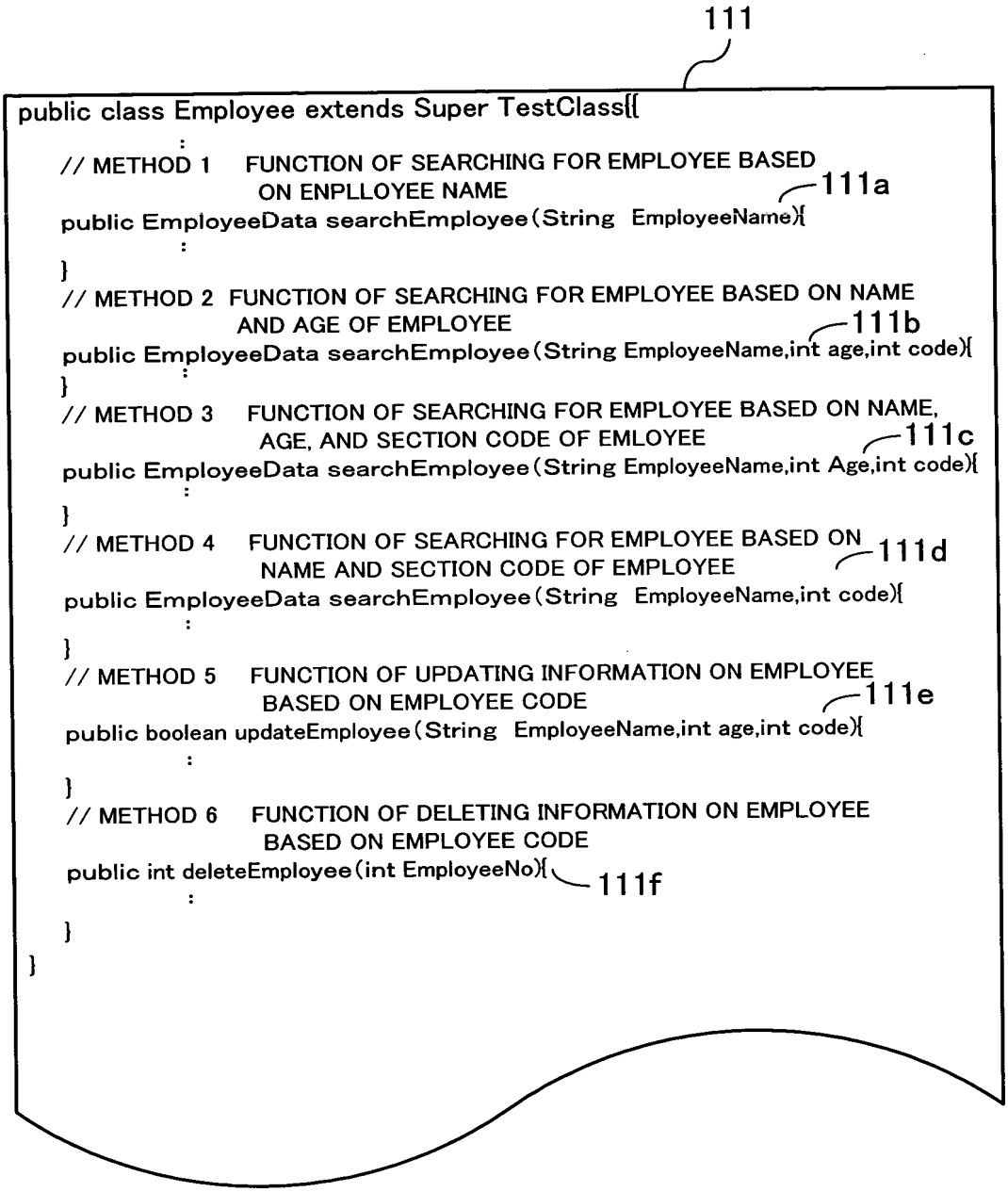
111
public class Employee extends Super TestClass{{
:
// METHOD 1 FUNCTION OF SEARCHING FOR EMPLOYEE BASED
ON ENPLLOYEE NAME
111a
public EmployeeData searchEmployee(String EmployeeName){
:
}
// METHOD 2 FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON NAME
AND AGE OF EMPLOYEE
111b
public EmployeeData searchEmployee(String EmployeeName,int age,int code){
:
}
// METHOD 3 FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON NAME,
AGE, AND SECTION CODE OF EMLOYEE
111c
public EmployeeData searchEmployee(String EmployeeName,int Age,int code){
:
}
// METHOD 4 FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON
NAME AND SECTION CODE OF EMPLOYEE
111d
public EmployeeData searchEmployee(String EmployeeName,int code){
:
}
// METHOD 5 FUNCTION OF UPDATING INFORMATION ON EMPLOYEE
BASED ON EMPLOYEE CODE
111e
public boolean updateEmployee(String EmployeeName,int age,int code){
:
}
// METHOD 6 FUNCTION OF DELETING INFORMATION ON EMPLOYEE
BASED ON EMPLOYEE CODE
public int deleteEmployee(int EmployeeNo){
111f
:
}
}

FIG. 7

131a

METHOD ID	CLASS NAME	METHOD NAME	RETURN VALUE NUMBER	PARAMETER NUMBER
1	Employee	searchEmployee	EmployeeData	1
2	Employee	searchEmployee	EmployeeData	2
3	Employee	searchEmployee	EmployeeData	3
4	Employee	searchEmployee	EmployeeData	2
5	Employee	updateEmployee	boolean	3
6	Employee	deleteEmployee	int	1

FIG. 8

131b

PARAMETER ID	MEHOD ID	PARAMETER NAME	PARAMETER TYPE
1	1	EmployeeName	String
2	2	EmployeeName	String
3	2	age	int
4	3	EmployeeName	String
5	3	age	int
6	3	code	int
7	4	EmployeeName	String
8	4	code	int
9	5	EmployeeName	String
10	5	age	int
11	5	code	int
12	6	EmployeeNo	int

FIG. 9

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151a

No	METHOD NAME	PARAMETER	NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
M1	searchEmployee	EmployeeName		Employee Data	
M1-1	searchEmployee	"F-TSU, TARO"	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M1-2	searchEmployee	""	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M1-3	searchEmployee	Null	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL

FIG. 10

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151b

No	METHOD NAME	PARAMETER		NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT OF TEST
M2	searchEmployee	EmployeeName	Age		Employee Data	
M2-1	searchEmployee	"F-TSU, TARO"	29	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M2-2	searchEmployee	""	29	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M2-3	searchEmployee	Null	29	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M2-4	searchEmployee	"F-TSU, HANAKO"	0	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH AGE IS 0
M2-5	searchEmployee	F-TSU, HANAKO	10	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M2-6	searchEmployee	"F-TSU, HANAKO"	65	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M2-7	searchEmployee	"F-TSU, HANAKO"	Null	ABNORMAL	Null	AGE IS NULL

FIG. 11

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151c

No	METHOD NAME	PARAMETER			NORMAL/ ABNORMAL	RETURN VALUE	VIEPOINT IN TEST
M3	searchEmployee	EmployeeName	Age	code			
M3-1	searchEmployee	"F-TSU TARO"	29	12345	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M3-2	searchEmployee	""	29	12345	ABNORMAL	Null	ABNORMA SYSTEM IN WHICH NAME IS BLANK
M3-3	searchEmployee	Null	29	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME I S NULL
M3-4	searchEmployee		0	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH AGE IS 0
M3-5	searchEmployee	"F-TSU, HANAKO"	10	12345	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M3-6	searchEmployee	"F-TSU, HANAKO"	65	12345	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGE
M3-7	earchEmployee	"F-TSU, HANAKO"	Null	12345	ABNORMAL	Null	AGE IS NULL
M3-8	earchEmployee	"F-TSU, HANAKO"	29	0	ABNORMAL	Null	EMPLOYEE CODE IS 0
M3-9	searchEmployee	"F-TSU, HANAKO"	29	Null	ABNORMAL	Null	EMPLOYEE CODE IS NULL
M3-10	searchEmployee	Null	Null	Null	ABNORMAL	Null	NAME AND AGE ARE NULL

FIG.12

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151d

No	METHOD NAME	PARAMETER		NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
M4-1	searchEmployee	EmployeeName	code			
M4-1	searchEmployee	"F-TSU, TARO"	12345	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M4-2	searchEmployee	""	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M4-3	searchEmployee	Null	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M4-4	searchEmployee	"F-TSU, HANAKO"	0	ABNORMAL	Null	SECTION CODE IS 0
M4-5	searchEmployee	"F-TSU, HANAKO"	Null	ABNORMAL	Null	SECTION CODE IS NULL
M4-6	searchEmployee	Null	Null	ABNORMAL	Null	NAME AND AGE ARE NULL

FIG. 13

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151e

No	METHOD NAME	PARAMETER			NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
M5	updateEmployee	EmployeeName	Age	code			
M5-1	updateEmployee	"F-TSU, TARO"	29	12345	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M5-2	updateEmployee	""	29	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M5-3	updateEmployee	Null	29	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M5-4	updateEmployee	"F-TSU, HANAKO"	0	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH AGE IS 0
M5-5	updateEmployee	"F-TSU, HANAKO"	10	12345	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M5-6	updateEmployee	"F-TSU, HANAKO"	65	12345	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M5-7	updateEmployee	"F-TSU, HANAKO"	Null	12345	ABNORMAL	Null	AGE IS NULL
M5-8	updateEmployee	"F-TSU, HANAKO"	29	0	ABNORMAL	Null	EMPLOYEE CODE IS 0
M5-9	updateEmployee	"F-TSU, HANAKO"	29	Null	ABNORMAL	Null	EMPLOYEE CODE IS NULL
M5-10	updateEmployee	Null	Null	Null	ABNORMAL	Null	EMPLOYEE CODE, NAME, AND AGE ARE NULL

FIG. 14

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

151f

No	METHOD OF NAME	PARAMETER	NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
M6	deleteEmployee	code		Boolean	
M6-1	deleteEmployee	12345	NORMAL	True	TEST OF NORMAL SYSTEM
M6-2	deleteEmployee	0	ABNORMAL	False	ABNORMAL SYSTEM IN WHICH EMPLOYEE CODE IS 0
M6-3	deleteEmployee	Null	ABNORMAL	False	ABNORMAL SYSTEM IN WHICH EMPLOYEE CODE IS NULL
M6-4	deleteEmployee	11111	ABNORMAL	False	ABNORMAL SYSTEM IN WHICH EMPLOYEE CODE IS NOT APPLICABLE

FIG. 15

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

112

```
public class Employee extends SuperTestClass{{
  // 1ST METHOD  FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON EMPLOYEE NAME
  private EmployeeData searchEmployee(String EmployeeName){        112a
                :
  }
  // 2ND METHOD   FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON NAME AND AGE OF
  EMPLOYEE                                                         112b
  public EmployeeData[ ] searchEmployee(String EmployeeName,int age,){
                :
  }
  // 3RD METHOD   FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON NAME, AGE,
  AND SECTION CODE OF EMPLOYEE                                     112c
  public EmployeeData searchEmployee(String EmployeeName,long Age,int
  section,Boolean retire){
                :
  }
  // 4TH METHOD   FUNCTION OF SEARCHING FOR EMPLOYEE BASED ON NAME AND
  SECTION CODE OF EMPLOYEE                                         112d
  public EmployeeData[ ] searchEmployee(String EmployeeName,int section){
                :
  }
  // 5TH METHOD  FUNCTION OF UPDATING INFORMATION ON EMPLOYEE BASED ON
  EMPLOYEE CODE                                                    112e
  public boolean updateEmployeebyNo(String EmployeeName,int age,int code){
                :
  }
  // 6TH METHOD   FUNCTION OF DELETING INFORMATION ON EMPLOYEE BASED ON
  EMPLOYEE CODE                                                    112f
  public int deleteEmployeebyNo(int EmployeeNo,StringEmployeeName){
                :
   }
}
```

FIG. 16

161a

METHOD ID	CLASS NAME	METHOD NAME	RETURN VALUE TYPE	PARAMETER NUMBER
1	Employee	searchEmployee	EmployeeData	1
2	Employee	searchEmployee	EmployeeData[ ]	2
3	Employee	searchEmployee	EmployeeData	4
4	Employee	searchEmployee	EmployeeData[ ]	2
5	Employee	updateEmployeebyNo	Boolean	3
6	Employee	deleteEmployeebyNo	int	1

FIG. 17

161b

PARAMETER ID	METHOD ID	PARAMETER NAME	PARAMETER TYPE
1	1	EmployeeName	String
2	2	EmployeeName	String
3	2	Age	int
4	3	EmployeeName	String
5	3	Age	Long
6	3	Section	int
7	3	Retire	Boolean
8	4	EmployeeName	String
9	4	Section	int
10	5	EmployeeName	String
11	5	Age	int
12	5	Code	int
13	6	EmployeeNo	int
14	6	EmployeeName	String

FIG. 18

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

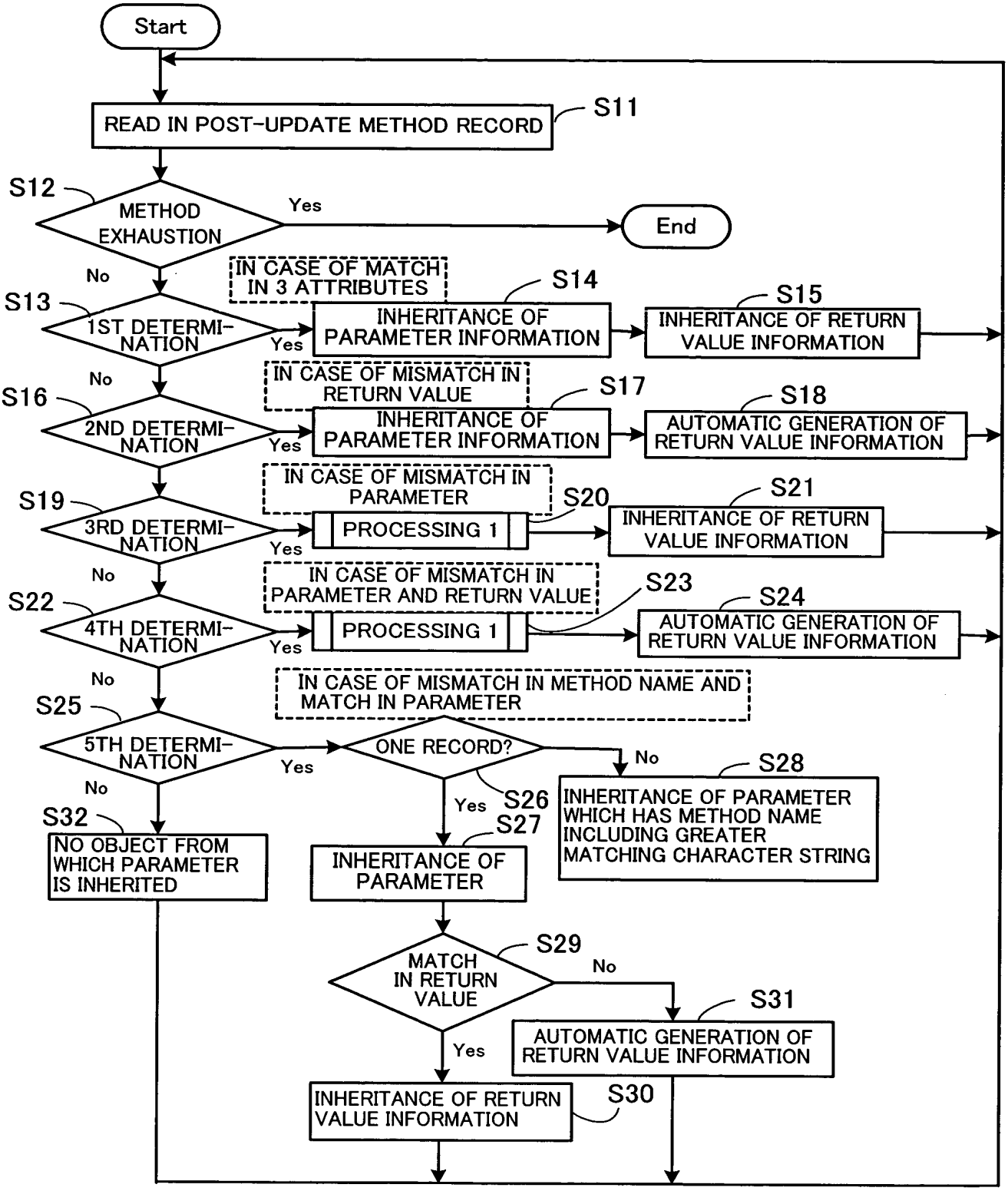
Start
READ IN POST-UPDATE METHOD RECORD
S11
S12
METHOD EXHAUSTION
Yes
End
No
IN CASE OF MATCH IN 3 ATTRIBUTES
S13
1ST DETERMI-NATION
Yes
S14
INHERITANCE OF PARAMETER INFORMATION
S15
INHERITANCE OF RETURN VALUE INFORMATION
No
IN CASE OF MISMATCH IN RETURN VALUE
S16
2ND DETERMI-NATION
Yes
S17
INHERITANCE OF PARAMETER INFORMATION
S18
AUTOMATIC GENERATION OF RETURN VALUE INFORMATION
IN CASE OF MISMATCH IN PARAMETER
S19
3RD DETERMI-NATION
Yes
S20
PROCESSING 1
S21
INHERITANCE OF RETURN VALUE INFORMATION
No
IN CASE OF MISMATCH IN PARAMETER AND RETURN VALUE
S22
4TH DETERMI-NATION
Yes
S23
PROCESSING 1
S24
AUTOMATIC GENERATION OF RETURN VALUE INFORMATION
No
IN CASE OF MISMATCH IN METHOD NAME AND MATCH IN PARAMETER
S25
5TH DETERMI-NATION
Yes
ONE RECORD?
No
S28
INHERITANCE OF PARAMETER WHICH HAS METHOD NAME INCLUDING GREATER MATCHING CHARACTER STRING
No
Yes
S26
S32
NO OBJECT FROM WHICH PARAMETER IS INHERITED
S27
INHERITANCE OF PARAMETER
S29
MATCH IN RETURN VALUE
No
S31
AUTOMATIC GENERATION OF RETURN VALUE INFORMATION
Yes
INHERITANCE OF RETURN VALUE INFORMATION
S30

FIG. 19

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

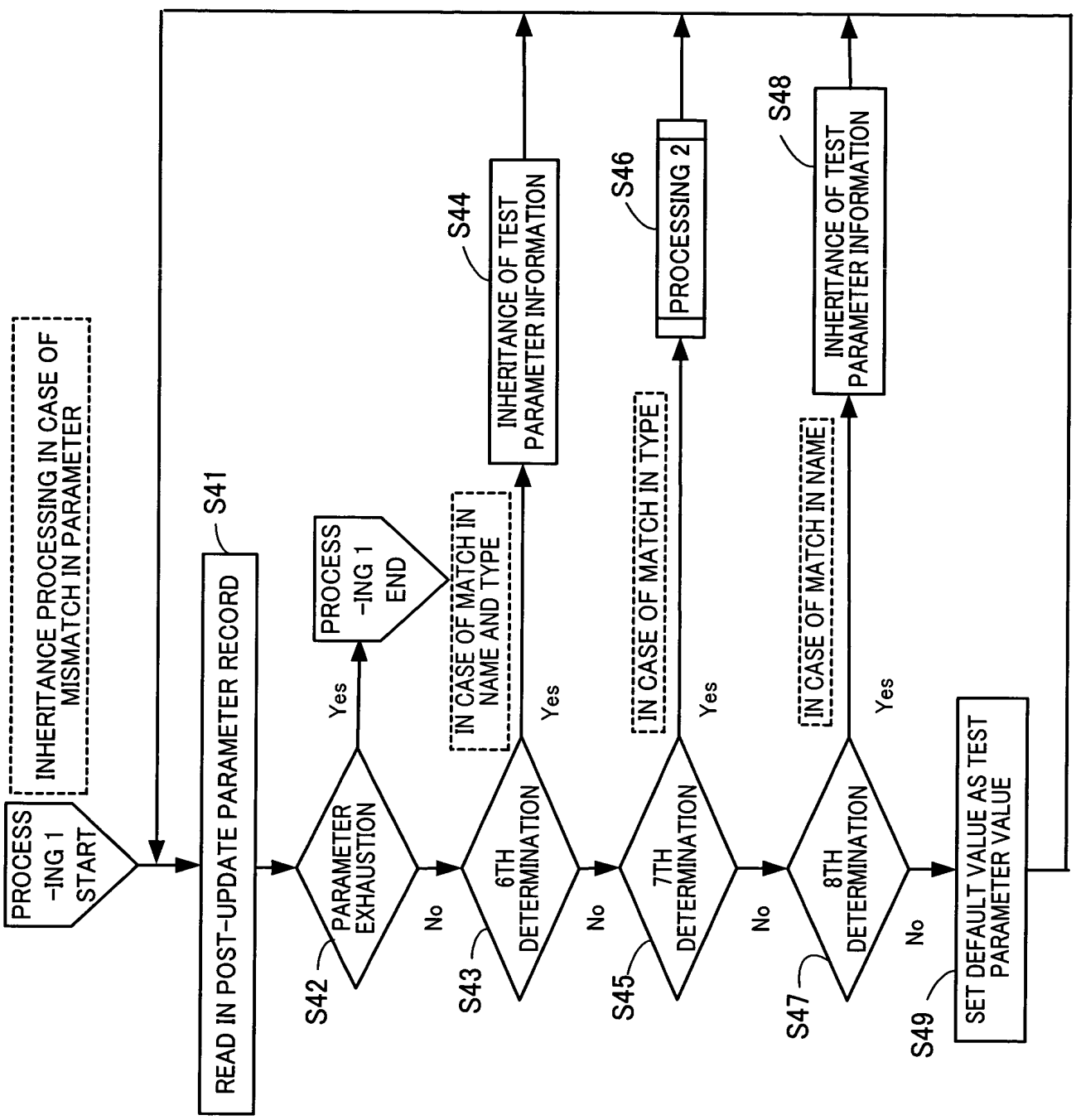

FIG. 20

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

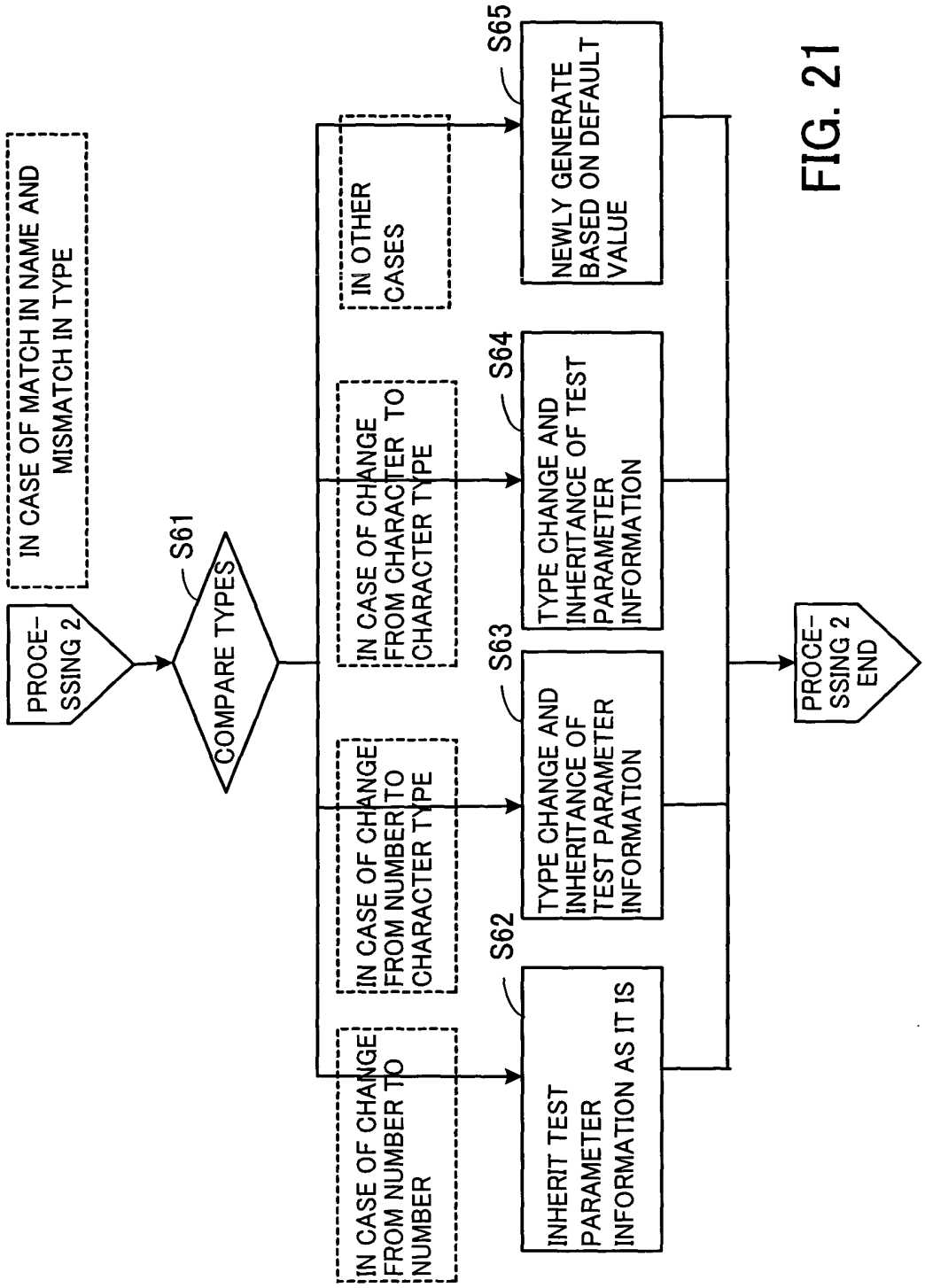

FIG. 21

	METHOD NAME	PARAMETER	RETURN VALUE
1ST DETERMINATION	○	○	○
2ND DETERMINATION	○	○	×
3RD DETERMINATION	○	×	○
4TH DETERMINATION	○	×	×
5TH DETERMINATION	×	○	○
	×	○	×

FIG. 22

NAME OF EXAMPLE	DETERMINATION	INHERITED TEST CASE	UNINHERITED TEST CASE
1ST METHOD	1ST DETERMINATION: COMPLETE MATCH IN THREE ATTRIBUTES	M1-1～M1-3	NONE
2ND METHOD	2ND DETERMINATION: MISMATCH IN RETURN VALUE	M2-1～M2-7	NONE
3RD METHOD	3RD DETERMINATION: MISMATCH IN PARAMETER	M3-1～M3-10	NONE
4TH METHOD	4TH DETERMINATION: MISMATCH IN PARAMETER AND RETURN VALUE	M4-1～M4-6	NONE
FIFTH METHOD	5TH DETERMINATION: MISMATCH IN PARAMETER NAME	M5-1～M5-10	NONE
6TH METHOD	UNINHERITABLE BASE ON THE DETERMINATIONS	NONE	M6-1～M6-4

FIG. 23

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

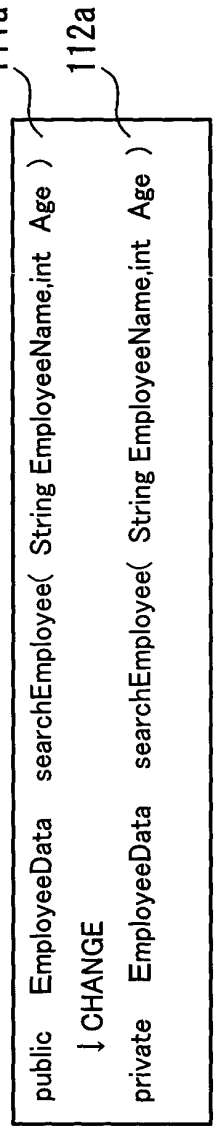
111a
112a
public EmployeeData searchEmployee(String EmployeeName,int Age)
↓ CHANGE
private EmployeeData searchEmployee(String EmployeeName,int Age)

FIG. 24

	METHOD NAME	PARAMETER	RETURN VALUE	OTHERS
BEFORE CHANGE	searchEmoployee	String EmployeeName, int Age	EmployeeData	public
AFTER CHANGE	searchEmoployee	String EmployeeName, int Age	EmployeeData	private

FIG. 25

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

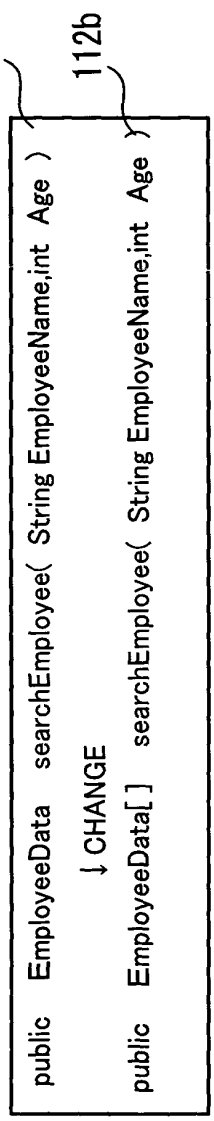
111b
112b
public EmployeeData searchEmployee(String EmployeeName,int Age)
↓CHANGE
public EmployeeData[ ] searchEmployee(String EmployeeName,int Age)

FIG. 26

	METHOD NAME	PARAMETER	RETURN VALUE	OTHERS
BEFORE CHANGE	searchEmoployee	String EmployeeName, int Age	EmployeeData	Public
AFTER CHANGE	searchEmoployee	String EmployeeName, int Age	EmployeeData[ ]	public

FIG. 27

↓ SET DEFAULT VALUE (NULL)

152b

No	METHOD NAME	PARAMETER		NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
	searchEmployee	EmployeeName	Age		Employee Data[ ]	
M2-1	searchEmployee	"F-TSU, TARO"	29	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M2-2	searchEmployee	""	29	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M2-3	searchEmployee	Null	29	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M2-4	searchEmployee	"F-TSU, HANAKO"	0	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH AGE IS 0
M2-5	searchEmployee	"F-TSU, HANAKO"	10	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M2-6	searchEmployee	"F-TSU, HANAKO"	65	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M2-7	searchEmployee	"F-TSU, HANAKO"	Null	ABNORMAL	Null	AGE IS NULL

FIG. 28

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

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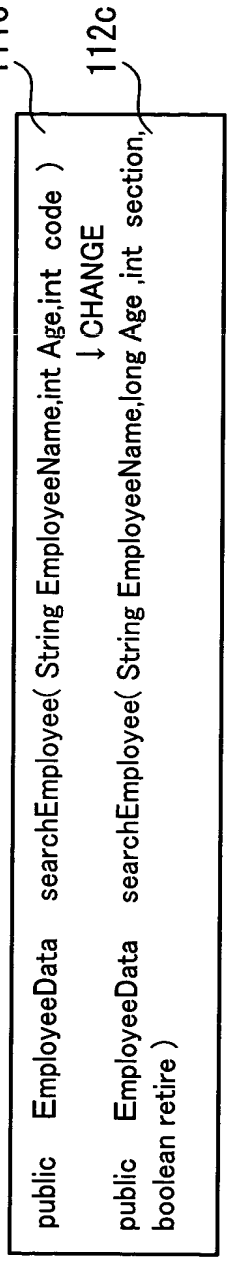

FIG. 29

	METHOD NAME	PARAMETER	RETURN VALUE	OTHERS
BEFORE CHANGE	searchEmoployee	String EmployeeName, int Age, int code	EmployeeData	Public
AFTER CHANGE	searchEmoployee	StringEmployeeName, long Age,int section, boolean retire	EmployeeData	Public

FIG. 30

152c

No.	METHOD PARAMETER				ABNORMAL/ NORMAL	RETURN VALUE	VIEWPOINT IN TEST
BEFORE CHANGE	EmployeeName (String)	Age (int)	Code(int)	NONE			
DETERMI-NATION	①MATCH IN BOTH	②MACHI IN NAME	③MATCH IN TYPE	④MISMATCH GENERATION OF DEFAULT)			
AFTER CHANGE	EmployeeName (String)	Age (long)	Section (int)	Retire (Boolean)			
M3-1	"F-TSU, TARO"	29	12345	true	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M3-2	""	29	12345		ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M3-3	Null	29	12345		ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M3-4	"F-TSU, HANAKO"	0	12345		ABNORMAL	Null	ABNORAL SYSTEM IN WHICH AGE IS 0
M3-5	"F-TSU, HANAKO"	10	12345		ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M3-6	"F-TSU, HANAKO"	65	12345		ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M3-7	"F-TSU, HANAKO"	Null	12345		ABNORMAL	Null	AGE IS NULL
M3-8	"F-TSU, HANAKO"	29	0		ABNORMAL	Null	SECTION CODE IS 0
M3-9	"F-TSU, HANAKO"	29	Null		ABNORMAL	Null	SECTION CODE IS NULL
M3-10	Null	Null0			ABNORMAL	Null	NAME AND AGE ARE NULL

FIG. 31

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

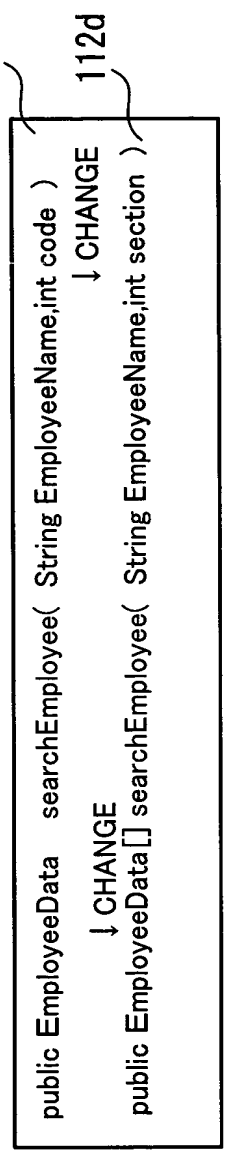
111d
112d
public EmployeeData searchEmployee(String EmployeeName,int code)
↓ CHANGE
public EmployeeData[] searchEmployee(String EmployeeName,int section)

FIG. 32

	METHOD NAME	PARAMETER	RETURN VALUE	OTHERS
BEFORE CHANGE	searchEmoployee	String EmployeeName, int code	EmployeeData	Public
AFTER CHANGE	searchEmoployee	String EmployeeName, int section	EmployeeData[ ]	Public

FIG. 33

152d

No	METHOD PARAMETER		NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
BEFORE CHANGE	EmployeeName (String)			EmployeeData	
DETERMI-NATION	①MATCH IN BOTH	③MATCH IN TYPE			
AFTER CHANGE	EmployeeName (String)	Section (int)		EmployeeData [ ]	
M4-1	"F-TSU, TARO"	12345	NORMAL	Null	TEST OF NORMAL SYSTEM
M4-2	""	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M4-3	Null	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M4-4	"F-TSU, HANAKO"	0	ABNORMAL	Null	SECTION CODE IS 0
M4-9	"F-TSU, HANAKO"	Null	ABNORMAL	Null	SECTION CODE IS NULL
M4-6	Null	Null	ABNORMAL	Null	NAME AND AGE ARE NULL

FIG. 34

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
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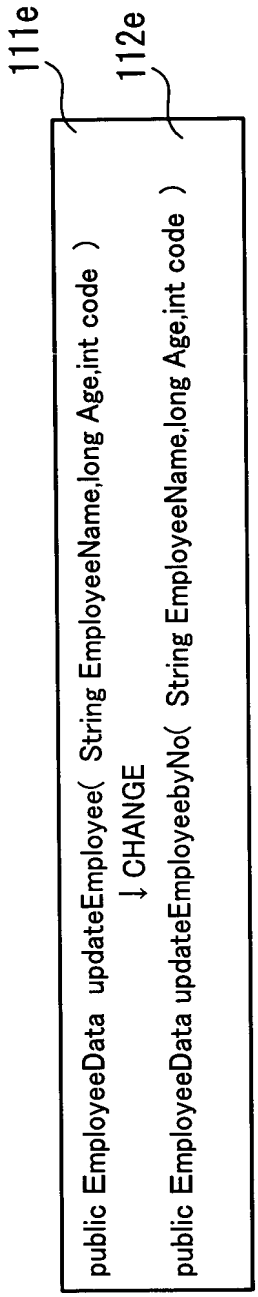

FIG. 35

	METHOD NAME	PARAMETER	RETURN VALUE	OTHERS
BEFORE CHANGE	updateEmoployee	String EmployeeName, long Age, int code	EmployeeData	Public
AFTER CHANGE	updateEmployeebyNo	String EmployeeName, long Age, int code	EmployeeData	Public

FIG. 36

152e

No	METHOD NAME	PARAMETER			NORMAL/ ABNORMAL	RETURN VALUE	VIEWPOINT IN TEST
	updateEmployebyNo	EmployeeName	Age	code			
M5-1	updateEmployebyNo	"F-TSU, TARO"	29	12345	NORMAL	SEARCH RESULT	TEST OF NORMAL SYSTEM
M5-2	updateEmployebyNo	""	29	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS BLANK
M5-3	updateEmployebyNo	Null	29	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH NAME IS NULL
M5-4	updateEmployebyNo	"F-TSU, HANAKO"	0	12345	ABNORMAL	Null	ABNORMAL SYSTEM IN WHICH AGE IS 0
M5-5	updateEmployebyNo	"F-TSU, HANAKO"	10	12345	ABNORMAL	Null	OUT OF RANGE OF EMPLOYEES' AGES
M5-6	updateEmployebyNo	"F-TSU, HANAKO"	65	12345	ABNORMAL	Null	OUT OF RANE OF EMPLOYEES' AGES
M5-7	updateEmployebyNo	"F-TSU, HANAKO"	Null	12345	ABNORMAL	Null	AGE IS NULL
M5-8	updateEmployebyNo	"F-TSU, HANAKO"	29	0	ABNORMAL	Null	EMPLOYEE CODE IS 0
M5-9	updateEmployebyNo	"F-TSU, HANAKO"	29	Null	ABNORMAL	Null	EMPLOYEE CODE IS NULL
M5-10	updateEmployebyNo	Null	Null	Null	ABNORMAL	Null	EMPLOYEE CODE, NAME, AND AGE ARE NULL

FIG. 37

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

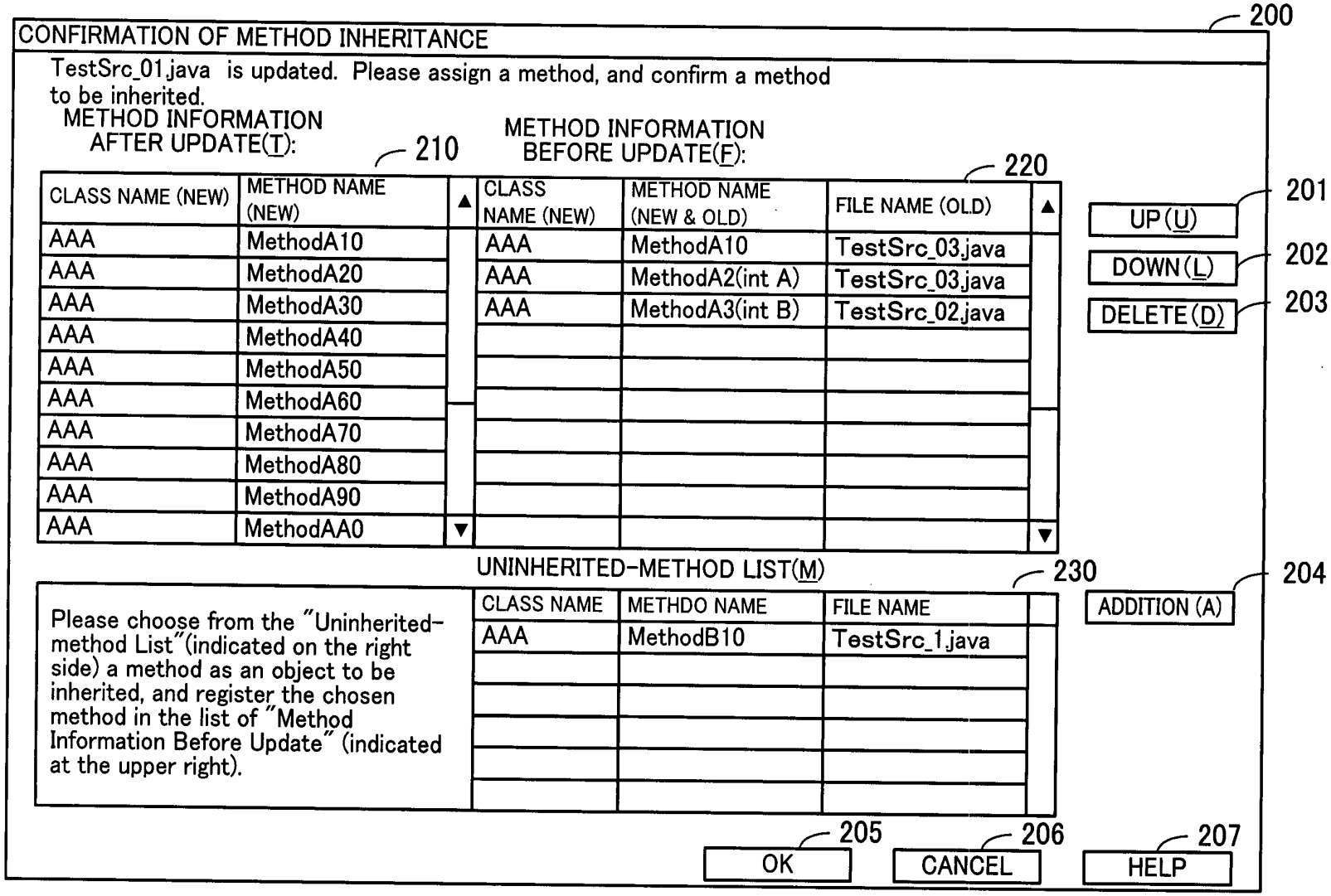

FIG. 38

TITLE: PROGRAM AND PROCESS FOR GENERATING DATA USED IN SOFTWARE FUNCTION TEST
INVENTORS: Ryoko FUJIKAWA, et al.
SERIAL NO.: UNASSIGNED
DOCKET NO.: 1095.1286

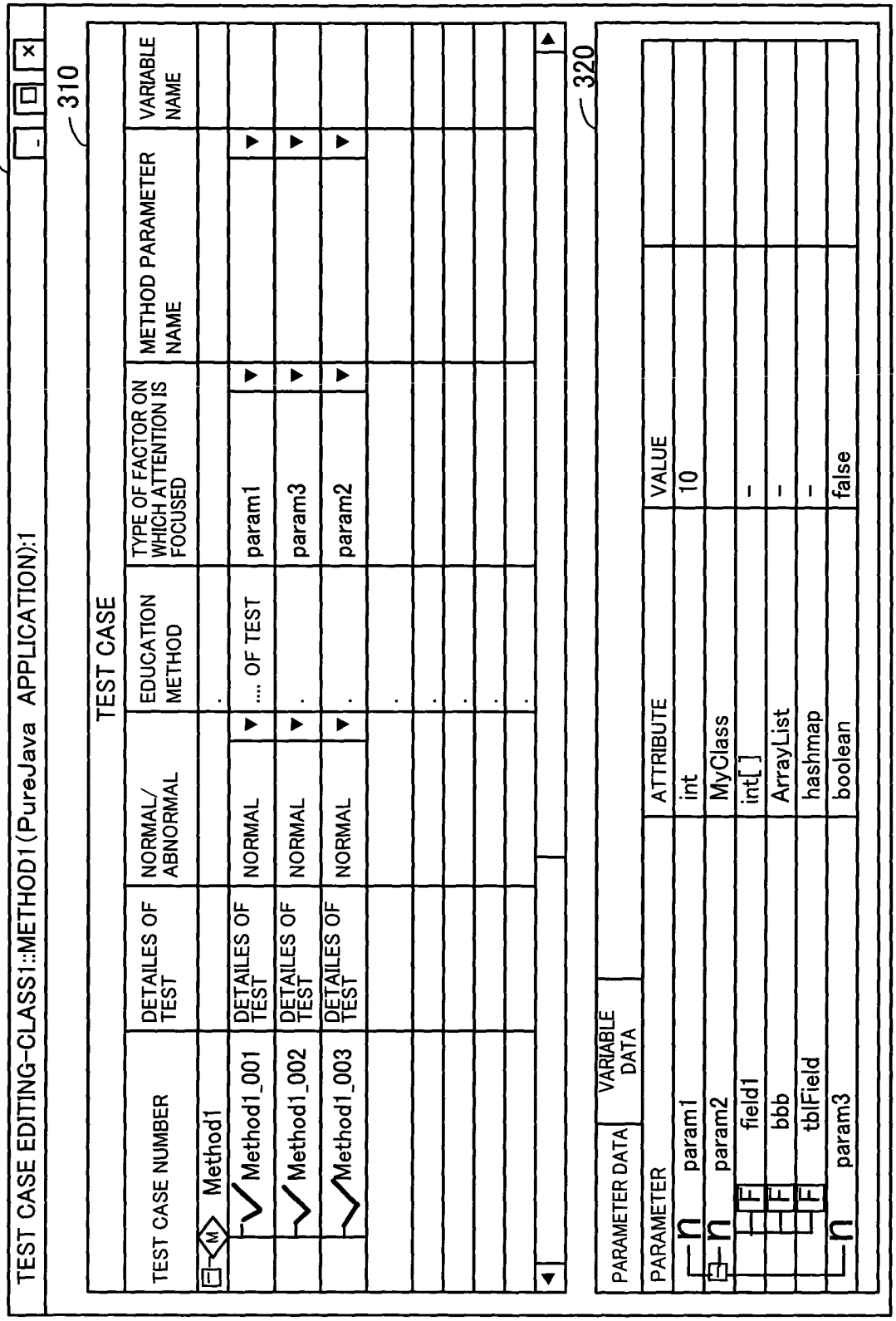
300
TEST CASE EDITING-CLASS1::METHOD1(PureJava APPLICATION):1
310
TEST CASE
TEST CASE NUMBER
DETAILES OF TEST
NORMAL/ ABNORMAL
EDUCATION METHOD
TYPE OF FACTOR ON WHICH ATTENTION IS FOCUSED
METHOD PARAMETER NAME
VARIABLE NAME
Method1
Method1_001
DETAILES OF TEST
NORMAL
.... OF TEST
param1
Method1_002
DETAILES OF TEST
NORMAL
.
param3
Method1_003
DETAILES OF TEST
NORMAL
.
param2
320
PARAMETER DATA
VARIABLE DATA
PARAMETER
ATTRIBUTE
VALUE
param1
int
10
param2
MyClass
field1
int[]
-
bbb
ArrayList
-
tblField
hashmap
-
param3
boolean
false

FIG. 39